

Title (en)

CONTROL DEVICE AND TEACHING METHOD FOR SEVEN-SHAFT MULTI-JOINT ROBOT

Title (de)

STEUERVORRICHTUNG UND LEHRVERFAHREN FÜR EINEN SIEBENACHSIGEN MEHRGELENKROBOTER

Title (fr)

DISPOSITIF DE COMMANDE ET PROCÉDÉ D'APPRENTISSAGE POUR ROBOT À ARTICULATIONS MULTIPLES À SEPT ARBRES

Publication

EP 2660014 B1 20151216 (EN)

Application

EP 11852596 A 20111221

Priority

- JP 2010292743 A 20101228
- JP 2011007156 W 20111221

Abstract (en)

[origin: EP2660014A1] A control system and teaching method for a seven-axis articulated robot are provided, which system and method are capable of easily grasping a motion trajectory of the whole robot and thereby performing proper teaching during teaching operation. The control system includes a setting device (21) for setting a specified plane (Pz) in a teaching mode for teaching a seven-axis articulated robot (1); a control unit (23) for controlling the movement of the seven-axis articulated robot (1) so as to restrict a motion trajectory of an elbow portion (E) within the plane (Pz) set by the setting device (21); and a computing unit (22) for performing inverse transform operation to calculate the pivot angle of each pivot axis (A1 to A7) based on a change in a position of the hand end (11), setting the restriction of the movement of the elbow portion (E) as a constraint condition, when the position for the hand end (11) is taught.

IPC 8 full level

B25J 9/22 (2006.01); **B25J 9/16** (2006.01); **G05B 19/425** (2006.01)

CPC (source: EP KR US)

B25J 9/16 (2013.01 - KR); **B25J 9/1664** (2013.01 - US); **G05B 19/42** (2013.01 - KR); **G05B 19/425** (2013.01 - EP US); **G05B 2219/39032** (2013.01 - EP US); **G05B 2219/39414** (2013.01 - EP US); **G05B 2219/40074** (2013.01 - EP US)

Cited by

US11453120B2; US11312019B2; US11203117B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2660014 A1 20131106; **EP 2660014 A4 20140917**; **EP 2660014 B1 20151216**; JP 2012139754 A 20120726; JP 5547626 B2 20140716; KR 101498836 B1 20150304; KR 20130066689 A 20130620; US 2013345866 A1 20131226; US 9073211 B2 20150707; WO 2012090440 A1 20120705

DOCDB simple family (application)

EP 11852596 A 20111221; JP 2010292743 A 20101228; JP 2011007156 W 20111221; KR 20137010195 A 20111221; US 201113977281 A 20111221